

EMERGENCY PREPAREDNESS POINTER

MARCH 2023

FLOODING: SNOWMELT



Snow is vital to water supplies in the western United States. As snow melts, it moves into rivers that bring water to many valley areas. Snowmelt rate depends upon the amount of snow in the mountains and weather during the spring and summer. According to US Geological Survey, nearly 75 percent of water supplies in the western states are filled from snowmelt.

The relationship between the snowpack and spring weather is usually a good one for the Treasure Valley. Mountain runoff is managed by reservoirs, rivers, and creeks usually without any flooding issues. However, if flooding factors influenced by snowmelt are favorable, flooding can occur within our county.

SNOWMELT FLOODING FACTORS

Very moist soil prior to the snowmelt

Fall rains can soak the soil and cool weather can keep the ground from drying out. This limits how much moisture the ground can absorb.

Frozen soil of ground frost

Frozen ground will prevent water infiltration into the soil.

Heavy winter snow cover

More snow equals more water. If the heavy snow is widespread, it will keep the air cool and the snow may stay later in the year. This snow is then susceptible to rain-on-snow events and rapid snowmelt.

Rain-on-snow events

Widespread rain during the snowmelt will warm up the snowpack and increase the flow to rivers and streams. The combination of rain and snowmelt can cause flash flooding.

Rapid snowmelt

Snowmelt rates are normally similar to a light to moderate rainfall. However, a sudden warming trend with night time temperatures above freezing can create much higher melt rates.

SNOWMELT FLOODING RESOURCES

The following resources provide information on the current Idaho snowpack in the mountains and Idaho river flows in the valleys:

- [Idaho SNOTEL Snowpack Report](#)
- [Idaho Snow Water Equivalent Maps](#)
- [Reservoir Storage Teacup Diagram](#)
- [Real-Time Data for Idaho Streamflows](#)
- [The Boise River: From Snow to River to You](#)
- [Boise River Flooding FAQs](#)